



2002-03-15

Number of pages: 61

## **ISO/TC 211**

### **Geographic information/Geomatics**

**Title:** Result of voting on ISO/DIS 19115 Geographic information - Metadata

**Project:** 19115

**Source:** ISO Central Secretariat

**Status:** Result of voting. Comments received from OGC are included at the end.

**Required action:** For information. The secretariat will, in cooperation with the editor of 19115 and the chairman, go through the comments and make a proposal for resolution.

**Reference:** DIS 19115

**File names:** 211n1234.pdf

**Distribution:** P, O and L members  
Chairman  
WG Convenors  
Mr. Keith Brannon, ISO CS

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Title:

**Geographic information -- Metadata**

Document: [ISO/DIS 19115](#)  Committee: **TC 211**  
 Start date (CET): 2001-09-20 End date (CET): 2002-03-01  
 ISO/CS ballot closing date (CET): 2002-03-11 Voting phase: Enquiry  
 Status: CLOSED Version: 1  
 Vienna Agreement:

















**RESULT OF VOTING**





P-Members voting: 25 in favour out of 27 = 92.59 % (requirement  $\geq 66.66\%$ )

*(P-members having abstained are not counted in the vote)*

Member bodies voting: 2 negative votes out of 28 = 7.14 % (requirement  $\leq 25\%$ )

**APPROVED**

Country 	Member	Participation	Voted	Comments file
 Australia	SAI	P	Approval with comments	<a href="#">ISO/DIS_19115_SAI</a> 
Austria	ON	P	Approval	
Belgium	IBN	P	Approval	
Canada	SCC	P	Approval	
 China	SACS	P	Approval with comments	<a href="#">ISO/DIS_19115_SACS</a> 
 Czech Republic	CSNI	P	Approval with comments	<a href="#">ISO/DIS_19115_CSNI</a> 
Denmark	DS	P	Approval	
Finland	SFS	P	Approval	
France	AFNOR	O	Abstention	
Germany	DIN	P	Approval	
Hungary	MSZT	P	Approval	
 Italy	UNI	P	Approval with comments	<a href="#">ISO/DIS_19115_UNI</a> 
 Japan	JISC	P	Disapproval	<a href="#">ISO/DIS_19115_JISC</a> 
Kenya	KEBS		Approval	
Korea, Republic of	KATS	P	Approval	
Malaysia	DSM	P	Approval	
Morocco	SNIMA	P		
Netherlands	NEN	O	Abstention	
New Zealand	SNZ	P	Approval	
 Norway	NSF	S	Approval with comments	<a href="#">ISO/DIS_19115_NSF</a> 
Portugal	IPQ	P	Abstention	
Russian Federation	GOST R	P	Approval	
Saudi Arabia	SASO	P	Approval	
South Africa	SABS	P	Approval	
Spain	AENOR	P	Approval	
 Sweden	SIS	P	Approval with comments	<a href="#">ISO/DIS_19115_SIS</a> 
 Switzerland	SNV	P	Approval with comments	<a href="#">ISO/DIS_19115_SNV</a> 

Thailand	TISI	P	Approval	
Turkey	TSE	P	Approval	
 United Kingdom	BSI	P	Disapproval	<a href="#">ISO/DIS_19115_BSI</a> 
 USA	ANSI	P	Approval with comments	<a href="#">ISO/DIS_19115_ANSI</a> 
Yugoslavia	SZS	P	Approval	

## Comments from Australia

Member	Clause/ subclause	Paragraph/ Figure/ Table	Type	Comment	Proposed change
AU 01	6.2, Annex A Annex B	Figure 3	T	Errata: The part-whole relationships between datasets and aggregates are shown in Figure 3. However, although in section 5.5 it is indicated that the <i>DS</i> package is defined in ISO 19115, <i>DS</i> is not documented in Annex A and Annex B here.	Delete the specialised classes derived from <i>DS_Aggregate</i> from Figure 3. Move these to a new sub-clause of Annex A. Complete dictionary in Annex B to match. Annex A and Annex B require additional text to describe the <i>DS</i> package.
AU 02	A.2.1, B.2.1	Figure A.1	T	Cardinality of <i>MD_Metadata::contact</i> [1] is too limited. This probably suits statutory data providers, but limits the application of ISO 19115 elsewhere.	Adjust cardinality of <i>MD_Metadata::contact</i> to <i>[1..*]</i>
AU 03	A.2.1, A.2.8	Figure A.1, Figure A.10	T	Errata: <i>MD_ContentInformation</i> stereotype is not shown	<i>MD_ContentInformation</i> should show <<Abstract>>
AU 04	A.2.4	Figure A.4	T	Errata: <i>DQ_Result</i> stereotype is incorrect	<i>DQ_Result</i> should show <<Abstract>>
AU 05	A.2.5	Figure A.7	T	Errata: Missing aggregation relationship from <i>MD_Identification</i> (role= <i>resourceMaintenance</i> ) to <i>MD_MaintenanceInformation</i> , Missing aggregation relationship from <i>MD_Metadata</i> (role= <i>identificationInfo</i> ) to <i>MD_Identification</i>	Add the missing relationships
AU 06	A.2.8	Figure A.10		The class diagram for <i>MD_Identifier</i> is currently duplicated in both Figure A.9 and A.10 with references to both B.2.7 (where it is defined) and B.2.8 (where it isn't).	Remove <i>MD_Identifier</i> class diagram From Figure A.10.
AU 07	A.2.10	Figure A.12	T	Errata: Missing aggregation relationship from <i>MD_Identification</i> (role= <i>resourceFormat</i> ) to <i>MD_Format</i>	Add the missing relationship.

Member	Clause/ subclause	Paragraph/ Figure/ Table	Type	Comment	Proposed change
AU 08	A.3.1	Figure A.15		<i>EX_Extent</i> is very unsymmetrical between spatiotemporal dimensions, and in particular between horizontal and vertical dimensions.	A normalised solution would be better.
AU 09	B.5.27		T	The CodeList <i>MD_TopicCategoryCode</i> , which contains the values of the mandatory element <i>identificationInfo::topicCategory</i> , is a mixture of subject and functional classifications. It is not comprehensive, and thus precludes the use of ISO 19115 for subject areas not included in the list.	An extension mechanism for CodeLists is required. A method for substituting an alternative CodeList is required..
AU 10	New		T	The distinctions between <i>identificationInfo::resourceFormat</i> , <i>identificationInfo::environmentDescription</i> and <i>identificationInfo::citation::presentationForm</i> are not clear.	Some guidance or illustration is needed of when each should be used, and the rationale for having this information in three different places explained.
AU 11	New		T	<i>distributionInfo::distributionFormat</i> vs <i>distributionInfo::transferOptions::offLine</i> is confusing.	Add guidance or illustration for usage.

AU 12			G	The comments (AU 13 to AU 20) are proposed for the next edition if not appropriate for current version..	--
AU 13	6.5	Table 3	T	Table 3 “core” would be a good illustration of the “profile” concept if presented as UML.	Show Table 3 “core” as UML.
AU 14	A.2.4	Figure A.4	T	A <i>DQ_QualitativeResult</i> is required	Add a <i>DQ_QualitativeResult</i> in parallel with <i>DQ_ConformanceResult</i> & <i>DQ_QuantitativeResult</i>
AU 15	A.2.5	Figure A.7	T	<i>MD_MaintenanceInformation</i> : Add an attribute to allow recording of who has responsibility for maintaining the metadata	Add <i>+contact[0..*]:CI_ResponsibleParty</i> to <i>MD_MaintenanceInformation</i>

AU 16	A.2.1 ++	Figure A.1 + NEW Table or diagram	T	Need to provide a mechanism to record general relationships between a dataset and external resources: e.g. to <i>MD_DataIdentification</i> add <i>+related[0..*]:MD_Identifier</i> , or <i>+related[0..*]:MD_RelatedEntity</i> , which has three attributes: - an identifier (e.g. URI, SAP code), - a role (e.g. ancestor dataset, associated project) - a type (dataset, project)	Add <i>+related[0..*]:MD_RelatedEntity</i> to <i>MD_DataIdentification</i>
AU 17	A.3.1	Figure A.15	T	Duplicate functionality between <i>EX_GeographicBoundingBox</i> and <i>GM_Envelope</i> from 19107.	Use <i>GM_Envelope</i> (from 19107) in <i>EX_Extent</i> , and deprecate <i>EX_GeographicBoundingBox</i> , <i>EX_VerticalExtent</i> , <i>?EX_TemporalExtent</i>
AU 18	A.3.2	Figure A.16	T	<i>CI_ResponsibleParty</i> : A date attribute would enable recording of when the party performed the “role”	Add <i>+actionDate[0..1]:Date</i> to <i>CI_ResponsibleParty</i>
AU 19	A.3.2	Figure A.16	T	<i>CI_ResponsibleParty</i> : Add an attribute to enable recording of the details of the actions undertaken when the party performed the “role”	Add <i>+actionDetails[0..1]:CharacterString</i> to <i>CI_ResponsibleParty</i>
AU 20	A.3.2	Figure A.16	T	A new “identifier” structure is introduced, even though <i>MD_Identifier</i> is already available.	Use <i>MD_Identifier</i> in <i>CI_Citation</i> , instead of the <i>identifier/identifierType</i> pair.

-AU END-

Member body	Clause/subclause	Paragraph/ Figure/ Table	Type of comment (ge/te/ed) 1	Comment	Proposed change	Observations of the secretariat on each comment submitted
CN	B.5.10	the 4 <sup>th</sup> column	T	big5 is used in Taiwan, Hong Kong of China and other areas.	Traditional Chinese code set used in Taiwan, Hong Kong of China and other areas.	
CN	B.5.10	The table	T	simplified Chinese code set is widely used in China, Singapore and other areas.	Add one line as the attached table 1 below.	
CN	K. 3	The 3 <sup>rd</sup> column of the 2 <sup>nd</sup> table	T	The example has used simplified Chinese. The character set code should be changed into the new one as suggested. That is 025.	Change the character set code from 004(utf8) to 025(GB2312) like the attached table 2 below.	

**Attached Table 1:**

25	big5	024	traditional Chinese code set used in Taiwan, Hong Kong of China and other areas.
26	GB2312	025	simplified Chinese code set

**Attached Table 2:**

Zho (Chinese)		<b>025 (GB2312)</b>	桥梁承重限制: 卡车毛重超过五公吨不得上桥
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Member body	Clause/subclause	Paragraph/ Figure/ Table	Type of comment (ge/te/ed) 1	Comment	Proposed change	Observations of the secretariat on each comment submitted
CN	B.5.10	第四栏	T	big5用于中国台湾、香港和其他地区。	用于中国台湾、香港和其他地区的传统（繁体）汉字集	
CN	B.5.10	表	T	简化汉字集广泛用于中国、新加坡和其他地区。	按以下附表1增加一行。	
CN	K. 3	第二表第三栏	T	该示例使用的是简化汉字，字符集代码应改为建议的新代码，即025。	将字符集代码从004(utf8)改为025(GB2312)，如以下附表2。	

**Attached Table 1:**

<b>25</b>	<b>big5</b>	<b>024</b>	用于中国台湾、香港和其他地区的传统（繁体）汉字编码字符集
<b>26</b>	<b>GB2312</b>	<b>025</b>	简化汉字编码字符集

**Attached Table 2:**

Zho (Chinese)		<b>025 (GB2312)</b>	桥梁承重限制: 卡车毛重超过五公吨不得上桥
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Member body	Clause/ subclause	Paragraph/ Figure/ Table	Type of comment (ge / te / ed) <sup>1</sup>	Comment	Proposed change	Observations of the secretariat on each comment submitted
CSNI	4.1	2 and 3	ed	Missing punctuation: ... and SG_Point ... e.g. Integer	... and SG Point. ... e.g. Integer.	
CSNI	6.5	2	ed	Missing reference: Listed below are ...	Listed below (see Table 3) are ...	
CSNI	6.15	1	ed	Incorrect references: ...an XML document (J.1) ... is also provided (J.2).	...an XML document (J.3) ... is also provided (J.4).	
CSNI	A.2.2	Fig. A.2, box MD_TopicCategoryCode	ed	Incorrect spelling: +climatologyMeterology	+climatologyMeteorology	
CSNI	B.2.2	41	ed	Incorrect spelling: ... of the dataset	... of the dataset	
CSNI	B.2.4.1.1	86	ed	Incorrect reference: Lines 86-91	Lines 87-91	
CSNI	B.2.7	186	ed	Superfluous punctuation: ... the reference system.	... the reference system	
CSNI	B.2.7	192	ed	Incorrect capital letter: Identity ...	identity ...	
CSNI	B.2.7.5	229	ed	Incorrect position of the space between words: ... scaling tot he actual ...	... scaling to the actual ...	
CSNI	B.2.8	250	ed	Duplication of the word: count of the number the number of lossy ...	count of the number of lossy ...	
CSNI	B.2.11.1	307	ed	Superfluous punctuation: ... metadata element.	... metadata element	
CSNI	B.3.1.1	348	ed	Incorrect capital letter: Description ...	description ...	
CSNI	B.3.2	361	ed	Missing quotation mark: ... of the World	... of the World"	
CSNI	B.4.3	7	ed	Incorrect position of the slash: ISO TS/19103	ISO/TS 19103	
CSNI	B.5.18	11	ed	Incorrect Domain code: 008	010	
CSNI	B.5.18	12	ed	Incorrect Domain code: 009	011	
CSNI	D.3.3	2	ed	Incorrect reference: ... with 2.3.2 of ...	... with 2.3 of ...	
CSNI	D.4.1	2	ed	Incorrect reference: ... in clause D.2 ...	... in clause 2.2 ...	
CSNI	G.8	2	ed	Incorrect reference: ... be found in B.1.5.2.	... be found in B.1.5.3.	
CSNI	J.4	1	ed	Incorrect references: ... clauses J.3 and J.4 provide ...	... clause J.5 provides ...	

<sup>1</sup> ge = general - te = technical - ed = editorial  
FORM (ISO)  
2000-07-01

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CSNI	J.4	Fig. J.1, box TaxonomySystem	ed	Incorrect spelling: Characterstring	CharacterString	
CSNI	K.1	3	ed	Incorrect reference: ... be found in B.2.2 of this ...	... be found in B.2.3 of this ...	
CSNI	K.2	6x	ed	Incorrect reference: (B.6.16)	(B.6.10)	
CSNI	K.2	7x	ed	Incorrect capital letter: Content ...	content ...	
CSNI	K.3	1	ed	Incorrect reference: ... example (B.2.2 line 70).	... example (B.2.2 line 68).	
CSNI	K.3	70	ed	Incorrect identification: 70	68	
CSNI	Bibliography		ed	ISO 11180 cited in subclause B.3.2.1/381 is missing	Please add ISO 11180	
CSNI	Bibliography		ed	ISO 646 US cited in subclause B.5.10/22 is missing	Please add ISO 646 US	

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ITALY			general	<p><b>Objectives</b></p> <p>The Centro Interregionale is in charge for the implementation of a National Cartographic Catalogue in the framework of the “Agreement on GIS” among Central, Regional and Local Institutions.</p> <p>Such a Catalogue must provide all interested users with complete information concerning the whole cartographic production available in Italy: it is a <b>Metadata Catalogue</b>, where no maps are actually contained, unless they are needed for example purposes, but with data concerning the technical characteristics and the information content of the available cartography, along with pointers to the actual location of the real maps and the way to get them.</p> <p>The definition of the metadata structure for the Catalogue has been derived from the works (although not yet completed) of ISO/TC211 and in particular the reference document has been “ISO/DIS 19115 Geographic Information – Metadata” in its different versions, the last of which is dated August 20, 2001.</p> <p>A complete description of the System Architecture, and of the methods for searching and updating</p>		

<sup>1</sup> ge = general - te = technical - tr = editorial  
FORM (ISO)  
2000-07-01

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				the Catalogue is reported in the Reference Documents (cfr. [1], [2], [3]), where a full analysis of these aspects can be found; the purpose of this document instead, is to highlight the observation concerning the Draft International Standard 19115, emerged during the work the Centro Interregionale has done for the implementation of the National Cartographic Catalogue; in fact during the last year a considerable amount of metadata has been collected, and a significant effort has been done by the project team to organise these materials according to the standard: from this work, some ideas are emerged, that are worth to be considered in the process of approving the standard.		
ITALY			general	<p><b>The ISO/DIS 19115 in the project of the National Cartographic Catalogue</b></p> <p>The adoption of the ISO standard is due to different very important aspects:</p> <ul style="list-style-type: none"> <li>• The first reason is to agree on a common data structure (at level of logical model), among different institutions participating to the National Catalogue</li> <li>• The second is to force all the participants to a common data</li> </ul>		

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				<p>format (XML) in order to achieve a certain degree of systems interoperability</p> <p>It is worth noting in fact, that the National Cartographic Catalogue has not been implemented as a collection of information (with a concentration operation), but on the contrary as a sort of “search engine” that, behind a common user interface, interact with a great number of local institutions by those organisms that are in charge for the management of their own (from a geographical as well as thematic point of view) cartographic data.</p> <p>In such a system the central problem is to standardize not the tools (because each participant could have its own software) but the logical model, the data structures are based on, and the communication protocols: the adoption of ISO DIS19115 has been of great importance exactly in this direction.</p> <p>The way of system interoperability is deeply pursued by the most recent developments of information technology: in particular, languages such as XML with its extension to specific application areas (e.g. GML for geographic information), would make it possible not only <i>exchanging data</i>, but <i>accessing different systems</i> and finally <i>sharing</i></p>		

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				<p><i>the information.</i></p> <p>As far as the application of ISO DIS 19115 is concerned, the implementation of the Catalogue followed two main directions:</p> <ol style="list-style-type: none"> <li>1. To organise the metadata according to the logical model proposed by the DIS19115</li> <li>2. To develop the software components needed for production and interpretation of XML files according to the DTD contained in DIS19115</li> </ol> <p>The considerations illustrated in this document derives from this work, performed in over 1 year in a strict cooperation with a lot of regional institutions participating to the National Cartographic Catalogue: in [3] it is possible to evaluate the dimension of this work.</p>		
ITALY			general	<p><b>Two proposals</b></p> <p>The experience gathered in this work indicates two major areas in which the ISO/DIS 19115 could be extended: the first one concerns the introduction of some hierarchy and inheritance mechanisms, while the second one concerns the link toward the standard ISO 19110</p>		

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				<p><b>Feature Catalogue</b>, that is needed to fulfil the requirements of the users of a National Cartographic Catalogue, in particular those related to the completeness of information.</p> <p>Prior to the definition of these proposals, it is worth noting that they do not imply any formal extension to the standard, but are limited to suggestions about the interpretation of the standard <u>within the present logical model</u>.</p> <p>In the first case in fact, the proposal is to use entities and elements already defined in the schema to implement inheritance properties whose needs is somehow mentioned in DIS 19115, but not fully defined, and that appear to be very important to provide a more efficient system; in the second case the proposal is to formally define a DTD for the 19110 standard (as it is for 19115), for a better implementation of the logical model involved by the standard; this way the Feature Catalogue standard would evolve in the same direction of Metadata, building up the structures needed for a better link among the two data set.</p> <p><b>Hierarchies</b></p> <p>The most important criticism to advance towards the ISO/DIS</p>		

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				<p>19115, concerns the observations that the proposed model is suited for the description of independent maps, but seems to be weak for the description of a unique maps, that is divided in “tiles” with different characteristics upon a basis of common information; this is the case in particular, for a certain number<sup>2</sup> of Regional Technical Maps (CTR), that are among the most important sources of basic geographic data in Italy: they are divided in tiles according to a specific layout, and some attributes must be specified for each tile (e.g. reference date), while the great majority are valid for the whole map (e.g. reference system).</p> <p>The ISO/DIS 19115 actually introduce the idea of hierarchical structures, where in the MD_METADATA entity the following elements are defined:</p> <ul style="list-style-type: none"> <li>• 2. fileIdentifier</li> <li>• 5. parentIdentifier</li> <li>• 6. hierarchyLevel</li> </ul> <p>Moreover two specific annexes (H and I, but they are only informational) are provided with some definition that could be useful in this direction, but they are not complete and the example are insufficient.</p>		

<sup>2</sup> The problem is particularly significant for the older, paper based CTR, while the more recent production of “information layer” is more suited for a description through the Feature Catalogue

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				<p>Finally the schema expressed by the DTD (Annex F), that is the fundamental reference for the validation of exchange XML files, does not permit the use of this possibility, because it enforces the complete description of each dataset, with no way to point to other hierarchically superior elements (series).</p> <p>The approach we have implemented in the National Cartographic Catalogue is suited for an inheritance mechanism, that allows the description of a “tiled” map, with a <i>root-element</i> where all common elements are reported, and many <i>child-elements</i> where only the specific attributes are defined because all the others are inherited by the parent-element.</p> <p>The logical model of the National Cartographic Catalogue has a three level hierarchy (with levels named “Theme”, “Edition” and “Dataset”, cfr. [1]), so the problem is how to implement an efficient derivation of the XML files (compliant with the DIS19115) needed by the search engine and the consultation interface.</p> <p>The proposal is to apply the</p>		

<sup>3</sup> This is a duplicatoin of the same information; it would be better to declare this attribute as optional, as it appear to be logical, but this would imply a modification in the 19115 DTD that does not seem to be justified for this only reason.

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				<p>opportunity given by the 19115 DTD to provide more <b>identificationInfo</b> sections within the same <b>MD_Metadata</b>.</p> <p>In particular, when the XML files are produced, the first <b>identificationInfo</b> section is filled with the information relevant for the entire map (“Edition” level), while the following (if any) are filled with the “Dataset” level; each section must have its own unique identifier in the Metadata file.</p> <p>The <b>identificationInfo</b> sections following the first one, must have at least the following attributes (cfr. the example file in Annex 1):</p> <ul style="list-style-type: none"> <li>• <b>title</b>: DataSet name (e.g. the name and the code identifying each tile in a CTR)</li> <li>• <b>date (creation)</b>: the production date of the DataSet</li> <li>• <b>citedResponsibleParty</b>: data concerning the author of the dataset, as defined in DIS 19115, with <b>rolecode</b> = “Originator”</li> <li>• <b>abstract</b>: free text</li> <li>• <b>credit</b>: list of contributors; free text</li> <li>• <b>resourceFormat</b>: as defined in DIS 19115</li> <li>• <b>language</b>: as defined in DIS 19115</li> <li>• <b>topicCategory</b>: repeating those reported at “Edition” level<sup>3</sup></li> <li>• <b>geographicBox</b>: extension of the DataSet (typically smaller</li> </ul>		

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				<p>than the whole “Edition”)</p> <ul style="list-style-type: none"> <li>• <b>environmentDescription:</b> as defined in DIS 19115</li> <li>• <b>EX_TemporalExtent:</b> acquisition date for the realization of the dataset (typically different from on dataset to another in the same “Edition”)</li> </ul> <p>This way of applying the ISO/DIS 19115 to implement the inheritance among elements, include all involved elements in the same XML file, so the following attributes are not used:</p> <ol style="list-style-type: none"> <li>2. fileIdentifier</li> <li>5. parentIdentifier</li> <li>6. hierarchyLevel</li> <li>7. hierarchyLevelName</li> </ol> <p><b>Relation with the Feature Catalogue</b></p> <p>The description of the information content of each map is managed in the DIS 19115 through the entity contInfoTypes, who provides for 3 different sub-entity:</p> <ul style="list-style-type: none"> <li>• Feature Catalogue Description, for the description of vector data, or even for paper maps.</li> <li>• Coverage Description, for the description of raster (or better for gridded) data.</li> <li>• Image Description, for the description of images (in</li> </ul>		

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				<p>particular in a remote sensing context)</p> <p>The National Cartographic Catalogue at present does not consider remotely sensed data, so the most interesting entity is the Feature Catalogue; for this entity the ISO/DIS 19115 point to another ISO standard, that is the ISO/DIS 19110 – Feature Cataloguing Methodology (last edition dated june12, 2001.</p> <p>In coherence to this approach the logical model of the National Cartographic Catalogue provide for the definition (cfr. [1]) of one or more <i>Entities</i> for each <i>Edition</i>: each entity carry on its own information content, and geometric/topologic properties: these entities correspond exactly to the <i>FeatureTypes</i> in the ISO 19110 standard.</p> <p>So the logical model adopted for the Feature Catalogue is well suited to describe the information content of the maps managed by the National Cartographic Catalogue, and the present proposal does not involve an <i>extension</i> of the standard, but only the definition of the corresponding DTD in order to allow the validation of XML files compliant with the standard: in fact the DTD file attached to the ISO/DIS 19115 does not comprehend a DTD for the feature catalogue (only a pointer</p>		






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				<p>to), while the ISO 19110 (older) does not have an Annex with the DTD.</p> <p>In the present document a 19110-FeatureCatalogue.dtd is proposed, compliant with the logical model of the standard, to be used in conjunction with the 19115-DatasetMetadata for the publication of XML files providing a complete description of the cartography (general description and information content). This proposed DTD does not completely implement the 19110 standard, but only the main aspects, in particular those involved in the description of the information content of data in the National Cartographic Catalogue. Completing the DTD with the whole logical model of 19110 standard would be straightforward once the needed consensus would be established on methodological aspects.</p> <p>In Annex 2 it is enclosed the proposed 19110-FeatureCatalogue.dtd for the validation of XML files of a Feature Catalogue and the link to the corresponding Metadata XML files. In particular the following files are presented:</p> <ul style="list-style-type: none"> <li>• 19110-FeatureCatalogue.dtd</li> <li>• FC1352.XML (as an example XML Feature</li> </ul>		

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				<p>Catalogue)</p> <ul style="list-style-type: none"> <li>ED1352.XML (as an example XML Metadata with a pointer to the corresponding Feature Catalogue)</li> </ul> <p>The link is driven by the Metadata file by means of the contInfoTypes attribute where the pointer to the Feature Catalogue is stored. Two different files, referring to distinct standard seems to be the most flexible choice: this way the publication of a Feature Catalogue is not mandatory with the Metadata, and it is possible to manage a Feature Catalogue with no reference to any Metadata.</p>		
ITALY			general	<p><b>Reference Documents</b></p> <p>[1]. Convenzione Regione Basilicata - Centro Interregionale per il Sistema Cartografico di Riferimento, <i>Architettura del Repertorio Cartografico. Versione 3.2</i>. Roma, 20/12/2001</p> <p>[2]. Convenzione Regione Basilicata - Centro Interregionale per il Sistema Cartografico di Riferimento, <i>Manuale di consultazione del Repertorio Cartografico Nazionale</i>. Roma, 31/12/2001</p> <p>[3]. Convenzione Regione Basilicata - Centro Interregionale per il Sistema Cartografico di</p>		

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				<p>Riferimento, <i>Sintesi dei dati caricati nel Repertorio Cartografico Nazionale al 31.12.2001</i></p> <p>[4]. ISO/TC 211 Geographic Information/Geomatics – ISO/DIS 19115 Geographic Information, Metadata – 20/08/2001</p> <p>[5]. ISO/TC 211 Geographic Information/Geomatics – ISO/DIS 19110 Geographic Information, Methodology for feature cataloguing – 12/06/2001</p> <p> 19110-FeatureCatalogue.dtd</p> <p> 19115-DatasetMetadata-1_0.dtd</p> <p> 19115-DCW2.xml</p> <p> ED1352.xml</p> <p> FC1352.xml</p>		

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R. Lensi - UNI

# Template for comments and secretariat observations

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1	2	(3)	4	5	(6)	(7)
MB <sup>1</sup>	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/ Note (e.g. Table 1)	Type of com- ment <sup>2</sup>	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
JP01	3		te	ISO/IEC 19501-1 should be added as a normative reference since there are some UML concepts in ISO 19115 that are not provided in ISO/TS 19103 (e.g. derived classes)	Add "ISO/IEC 19501-1:— , <i>Information technology — Unified Modeling Language (UML) — Part 1: Specification</i> " as a normative reference	
JP02	4		ge	According to ISO 19104, A.1.8, references to standardized definitions shall be presented within square brackets after the definition.		
JP03	4.1		te	This definition is not harmonized with ISO/TS 19103, 4.1.5.	Harmonize both definitions consistently	
JP04	4.1		ed	There is no "SG_Point" defined in Spatial Schema.	"SG_Point" should be replaced by "GM_Point".	
JP05	4.4		te	This definition is not harmonized with ISO 19123, 4.23.	Harmonize both definitions consistently	
JP06	4.5		te	The term "metadata" has already been defined in ISO/IEC standards for many years and is widely used. (See 8 <sup>th</sup> comment of Canada on ISO/DIS 19113 in ISO/TC211 N 1141)	Refer to the English and French existing ISO/IEC definitions for "metadata" as stated in ISO/IEC 2382 IT Vocabulary: <b>metadata</b> : Data about data elements, including their data descriptions, and data about data ownership, access paths, access rights and data volatility.{PRIVATE} <b>métadonnée</b> : Donnée au sujet d'élément de données, y compris leurs descriptions de données, ou donnée au sujet de la propriété des données, des chemins d'accès, des droits d'accès et de la volatilité des données. Source: ISO/IEC 2382-17:1999 (17.06.05)	
JP07	4.8		te	There is no note like 4.6 and 4.7.	The note "Equivalent to a package in UML terminology." should be added.	
JP08	5.3.4	Figure 2	ed	Mixed fonts in cardinalities	Make fonts consistent	
JP09	5.4	c)	te	The definition of datatype is different from UML 1.4.	The definition should be; "A descriptor of a set of values that lack identity and whose operation do not have side effects. Datatypes include primitive pre-defined types and user-definable types. Pre-defined types include numbers, string and time. User-definable types include enumerations."	


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JP10	5.4	g)	ed	Missing ">": <<Metaclass>	Change to "<< Metaclass>>"	
JP11	6.3.1	The last sentence of the last paragraph and the first line of Table 2	ed	Subclause "Name" seems to be strange. (See the title of the second column in this template)	Replace "subclause Name" by "Subclause Number"	
JP12	6.3.2.4	5 <sup>th</sup> paragraph	ed	It is strange that single quotation marks are used in only this paragraph.	Use double quotation marks	
JP13	6.3.2.4	6 <sup>th</sup> paragraph	ed	Upside-down double quotation mark: "statement" and "processStep"	Inverse the head side mark	
JP14	6.3.2.4	7 <sup>th</sup> paragraph	ed	Upside-down double quotation mark: "statement" and "source"	Inverse the head side mark	
JP15	6.4.1	2nd paragraph, 1st sentence	te	"geographicElement" should be "horizontalElement" as the word "geographic" means not only horizontal but also vertical and temporal.	Replace by "horizontalElement". And, all "geographic" in the term "geographic extent" in ISO/DIS 19115 should be changed by "horizontal".	
JP16	6.5	Table 3	te	Since core metadata elements are not documented in accordance with data dictionary, it is hard to follow and comprehend them intuitively.	Rearrange each element in accordance with at least B.2.1	
JP17	6.5	Table 3	te	It is difficult to understand the structure of the core metadata by this table.	Add UML diagrams shown under the comments.  TC211_DIS19115 Pcom(diagram).d	
JP18	6.5	Table 3	te	Since MD_Identification is an abstract class, it cannot be used to make an instance of a core metadata.	MD_Identification in this table should be replaced by MD_DataIdentification.	
JP19	6.5	Table 3 (Dataset reference)	te	"date" and "dateType" are attributes of "CI.Date" (its role name is "date").	CI_Citation should be replaced by CI_Citation.date.	

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		date)				
JP20	6.5	Table 3 (Geographic location of the dataset)	te	As the element “geographicIdentifier” is an attribute of “EX_GeographicDescription” and it is referred by “geographicDescription” as a role of association from “MD_DataIdentification”, it is necessary to insert “geographicDescription” between “MD_DataIdentification” and “geographicIdentifier”.	Put “geographicDescription” between “MD_DataIdentification” and “geographicIdentifier”.	
JP21	6.5	Table 3	te	Users of this Standard cannot find Maximum occurrences for each core metadata element.	Define maximum occurrence of each metadata element. For example, “data set responsible party” could be written more than one times.	
JP22	6.5	Table 3 (Distribution format)	te	MD_Distributor is unnecessary to refer “format”.	“> MD_Distributor” should be removed.	
JP23	6.5	Table 3 (Reference system)	te	Since elements defined in MD_ReferenceSystem do not have a capability to describe the vertical reference system and its datum, it is not necessary to define MD_CRS and RS_ReferenceSystem. It is possible to refer the horizontal and vertical reference systems by RS_Identifier because it has “identifier” and “authority” to access the parameters.	For describing spatial reference system, it is recommended to use RS_Identifier only. As the data type, RS_Identifier should have “identifier” and “authority[0..1]” for its attributes.	
JP24	6.5	Table 3 (Lineage statement)	te	LI_Lineage is a data type of an attribute “lineage”.	Change “DQ_DataQuality” to “DQ_DataQuality.lineage”.	
JP25	6.15	2 <sup>nd</sup> sentence	ed	Incorrect clause reference: J.1	Change to “J.3”	
JP26	6.15	3 <sup>rd</sup> sentence	ed	Incorrect clause reference: J.2	Change to “J.4”	
JP27	A.1	Last sentence	ed	Missing punctuation	Add period at the tail of the last sentence	
JP28	A.2.1	Last sentence	ed	Missing punctuation	Add period at the tail of the last sentence	
JP29	A.2.1	Figure A.1	ed	The characters of role name “+distributionInfo” are overlapping with the class “MD_Metadata” box.	Shift it to left a little bit	
JP30	A.2.7	Figure A.9	te	The cardinality of “obliqueLinePointParameter” cannot be	Replace “0..2” by “0,2”	

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				just one since at least two points are necessary to describe an oblique line.		
JP31	A.2.10	Figure A.12	ed	Misspelling (duplicating the letter "t") in the upper conditional statement: distributorFormatt	Change to "distributorFormat"	
JP32	A.2.12	Figure A.14	te	Figure A.14 illustrates the association between MD_ApplicationSchemaInformation and MD_SpatialAttributeSupplement to describe featureCatalogueSupplement. However, MD_SpatialAttributeSupplement cannot be a feature catalogue.	Classes under MD_ApplicationSchemaInformation should be eliminated if they do not illustrate feature catalogues. Define the entity for feature catalogue to allow the citation to feature catalogues from the application schema entity.	
JP33	B.1.1	last sentence	ed	There is no difference between "geographic feature" and "feature" in ISO 191XX series.	Remove "geographic" to avoid miss understanding.	
JP34	B.1.7	NOTE	te	This description was valid in the 1 <sup>st</sup> CD stage of ISO 19118 and there is no definition of data type in the latest version of ISO 19118 any longer. Now sub clause 6.5.2 in ISO/TS 19103 seems to supersede it.	Replace "ISO 19118, 8.2.2" by "ISO/TS 19103, 6.5.2"	
JP35	B.2.1	Line 7	te	There is a discrepancy between condition in this line and conditional statements in Figure A.1.	Harmonize both conditions consistently	
JP36	B.2.1	Line 20	te	"matadataConstraints" should provide restrictions about not data but metadata	Replace "data" by "metadata"	
JP37	B.2.2	Line 29	ed	Duplicating plural expression in definition: organizations(s)	Change to "organization(s)"	
JP38	B.2.2	Line 40	te	Element "characterSet" is allowed to occur only one time. But when plural "language" are described , the "characterSet" should be allowed plural occurrence too.	Change the Maxmam occurrence "1" into "N".	
JP39	B.2.2	Line 41	ed	Misspelling: dataset	Change to "dataset"	
JP40	B.2.3 B.2.4	first row	ed	The title "name" should be "name/role name".	Change the title.	
JP41	B.2.3	Line 70-77 and 79	te	According to line 69, these elements should provide restrictions about not only resource but also metadata	Replace "resource" by "resource or metadata"	
JP42	B.2.4.4	Line140.(ext ent)	te	The word "spatial" in the definition should be "horizontal", as spatial means both horizontal and vertical.	Replace "spatial" by "horizontal".	
JP43	B.2.6	Line 169	te	The definition is almost the same as that of line 168.	Make the definition distinctive or remove this line	

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JP44	B. 2.6	Line 174	ed	Name "parameters" is not suitable for short name "georefPars" .	Change the name into "georeferencedParameters".	
JP45	B.2.6.2	Line 184	te	Incorrect explanation in definition	Change to "name of point <b>or</b> vector objects used to locate zero-, one-, two- <b>or three</b> - dimensional spatial locations in the dataset"	
JP46	B.2.7.1		ed	Unnecessary vertical space between Line 202 and Line 203	Reduce this vertical space	
JP47	B.2.7.5	Line 229	ed	Misspelling: tot he	Change to "to the"	
JP48	B.2.8	Line 250	ed	Duplicate phrase: the number	Remove this phrase	
JP49	B.2.10.5	Line 300	te	"dataset" in definition should be "resource" considering term coincidence with line 298 and line 299	Replace "dataset" by "resource"	
JP50	B.2.12	Line 325	te	The data type of this file could be binary, as graphics files cannot be represented by using text format.	Replace "CharacterString" in data type and "Free text" in domain by "Binary" respectively	
JP51	B.2.12, B.2.12.1 and B.2.12.2		te	See JP32		
JP52	B.3.1	Extent Information EX Extent	te	"spatial" should be "horizontal". See JP42.	Replace by "horizontal".	
JP53	B.3.1	Line 336	te	The title of this element should be renamed as "horizontalElement", because "verticalElement" also describes the geographic extent. By the way, most geographic identifiers are horizontal.	Replace "geographicElement" by "horizontalElement"	
JP54	B.3.1.1	Geographic Extent information	ed	See JP15		
JP55	B.3.1.1	Line 343	te	Note documented in definition should be eliminated because the extent is represented by longitude and latitude.	Remove note statement	
JP56	B.3.1.2	Line 351	te	TM_Primitive is difficult to implement the temporal extent.	This element should be separated to two. The first is "beggingValue" that is the begging instant represented by TM_CalDate. The second is "endValue" that is the end instant represented by TM_CalDate.	

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JP57	B.3.2	Line 361	ed	Missing double quotation mark in definition: "Digital Chart of the World"	Change to "Digital Chart of the World"	
JP58	B.3.2	Line 365	te	The example in definition should be specific identifier in contrast with that of line 366.	Make the example specific	
JP59	B.3.2.1	Line 381	ed	This element not only is used for delivery but also other purposes.	The element name should be changed as "address", and tag name should be "addrs".	
JP60	B.4.3	7 <sup>th</sup> paragraph	ed	Incorrect name: ISO TS/19103	Change to "ISO/TS 19103"	
JP61	B.4.4		te	The explanations of each metaclass should be reflected in ISO 19109 more exactly.	Refer the explanation in ISO 19109 more strictly	
JP62	B.4.4	3 <sup>rd</sup> sentence	ed	Incomplete sentence	Add "textual information" at the top of this sentence.	
JP63	B.4.5		ed	"primitive" is a generic term.	Title of this section should be "PeriodDuration and temporal primitive information".	
JP64	B.5.6	Title	ed		Insert a space in front of "<<CodeList>>"	
JP65	B.5.7	Title	ed	The letter "l" in <<CodeList>> should be capital letter.	Change to "<<CodeList>>"	
JP66	B.5.8	Line 8 and 10	te	"nonImageSensor" and "platform" do not seem to be suitable in an "initiative" point of view.	Remove line 8 and 10	
JP67	B.5.15	Line 1	te	Same as JP45.		
JP68	B.5.15	Line 2	te	The name "complexes" is not necessarily plural expression.	Change to "complex"	
JP69	B.5.15	Line 3	te	The name "composites" is not necessarily plural expression.	Change to "composite"	
JP70	B.5.15	Line 7	ed	Missing "primitive" in definition: geometric	Change to "geometric primitive"	
JP71	B.5.18	Line 11-13	ed	Incorrect number in domain code: "008", "009" and "998"	Change to "010", "011" and "012" respectively	
JP72	B.5.21	Title	ed	The first letter "e" in <<enumeration>> should be capital letter.	Change to "<<Enumeration>>"	
JP73	B.5.28		ed	Names and definitions of Topological level code are not corresponding with Spatial Schema (19107).	The table should be changed to follow ISO 19107. For example, names can be, primitive aggregate complex composite.	
JP74	C.5	Figure C.1	ed	Area boundaries "core metadata components" and	Detach both boundaries adequately	

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				“community profile 1” are barely overlapping each other.		
JP75	C.6	Page 90	ed	This page is a blank paper.	Reduce this page and decrement the succeeding page numbers	
JP76	D.2.2	a)	ed	Missing punctuation	Add a period at the tail of “Standard”	
JP77	D.3.2	d)	ed	Missing punctuation	Add a period at the tail of “Basic”	
JP78	D.3.3	2 <sup>nd</sup> sentence	ed	The contents of 2.3.2 are not for the test.	It could be “D.2”.	
JP79	D.3.3	3 <sup>rd</sup> sentence	ed	2.3 is not appropriate for the test.	It could be “D.2”.	
JP80	F.1	2 <sup>nd</sup> sentence of 1 <sup>st</sup> paragraph	ed	Incorrect file name: ISO 19115-DatasetMetadata.dtd	Change to “19115-DatasetMetadata.dtd”	
JP81	F.2 and J.3		te	There are some discrepancies about metadata entity documenting order between data dictionary and XML DTD as well as XML metadata sample based on it, although B.2.1 and J.2 are consistent with each other.	Rearrange metadata entity order consistently	
JP82	F.2	Line 2 of XML DTD document	te	This comment line does not seem to be suitable for an international standard document because of appearing a specific company name.	Remove this line	
JP83	F.2	Last line of page 98 and 35 <sup>th</sup> line of page 101	ed	Tag name “status” does not correspond with the short name described in B.2.2 line 28.	Change to “idStatus”	
JP84	F.2	Line 20-34 of page 99	te	Expression of “measResult+” does not reflect “one or two” cardinality rule in accordance with Figure A.4.	Change to “measResult, measResult?”	
JP85	F.2	Line 1 of page 100	te	Expression of “transDimMap*” does not reflect “zero, one or two” cardinality rule in accordance with Figure A.8.	Change to “(transDimMap, transDimMap?)?”	
JP86	F.2	Line 7 of page 100	te	Expression of “stanPara*” does not reflect “zero, one or two” cardinality rule in accordance with Figure A.9.	Change to “(stanPara, stanPara?)?”	
JP87	F.2	Line 7 of page 100	te	Expression of “obLnPtPars*” does not reflect “zero or two” cardinality rule in accordance with Figure A.9 (cf. JP30).	Change to “(obLnPtPars, obLnPtPars?)?”	
JP88	G.2	METHOD VIII)	ed	Incorrect reference: Stage 7	Change to “Stage 8”	
JP89	G.4	METHOD	ed	Missing final procedure	Add “III) Go to Stage 9.” after METHOD II)	
JP90	G.7	METHOD I)	ed	Missing punctuation	Add a period at the tail of “Stage 2”	
JP91	G.7	METHOD III)	ed	The letter “s” in “stage” should be capital letter.	Change to “Stage”	

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Date: 2002-01-25

Document: ISO/DIS 19115

1	2	(3)	4	5	(6)	(7)
MB <sup>1</sup>	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/ Note (e.g. Table 1)	Type of com- ment <sup>2</sup>	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
JP92	G.9	1 <sup>st</sup> sentence	ed	The concept of "entity" is more generic than "codelist".	In this case, "entity" should be replaced by "codelist" to clarify the intension of this sentence.	
JP93	H.2.1		ed	All "Data series" shown in this section could be "data set series".	Replace "data series" by "dataset series".	
JP94	H.2.1	1st sentence	te	The first sentence does not constitute the sentence. It does not have verb and object.	The sentence may be "A series or collection of spatial data which share characteristics of theme, source date, resolution, and methodology may have relation between a data set series metadata".	
JP95	H.2.3	1st sentence	te	The 1st sentence of this clause is miss-understanding the feature definition. Feature is defined as abstraction of real world phenomena and it may not have spatial attributes.	The 1st sentence should be as follows. Constructs known as features are grouped with common characteristics.	
JP96	H.2.5	1st sentence	ed	Geometric primitive may take 0 to 3 geometric dimension.	Insert ",3" between 0,1,2 and dimension.	
JP97	I.2		ed	There are some discrepancies about assigning vertical space in front of "Dataset – Administrative area A" and "Attribute type – Administrative area A" and documenting indentations of "Feature type – Administrative area A" and "Attribute type – Administrative area A" among each stage.	Make assigning vertical space and documenting indentations consistent on the whole	
JP98	I.2	At the bottom of page 120 and 121	ed	It does not seem that the blank spaces at the bottom of these pages are necessary.		
JP99	J.1	Title	te	Continuing two examples do not describe core metadata.	Remove "Core" from the title	
JP100	J.1	2 <sup>nd</sup> sentence of 1 <sup>st</sup> paragraph	ed	Upside-down double quotation mark: "Exploration Licences for Minerals"	Inverse the tail side mark	
JP101	J.2	Line 8	ed	Miss-spelling of "CI_ResonsibleParty".	"CI_ResponsibleParty"	
JP102	J.3	Line 2 of XML document	Te	This comment line does not seem to be suitable for an international standard document because of appearing specific brand and human names.	Remove this line	
JP103	J.3	Line 3 of XML DTD document	Ed	Incorrect DTD file name: 19115-DatasetMetadata-1_0.dtd	Change to "19115-DatasetMetadata.dtd"	

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JP10 4	J.3	<lineage><st atement>	Ed	"Antartica" is "Antarctica".	Revise the spelling.	
JP10 5	J.4	Last sentence	Ed	Incorrect clause reference: J.3 and J.4	Change to "J.5 and J.6"	
JP10 6	K.1	The last sentence of the last paragraph	Ed	Incorrect clause reference: B.2.2	Change to "B.2.3"	
JP10 7	K.2	Line 6x	Ed	Incorrect clause reference in domain: B.6.16	Change to "B.5.10"	
JP10 8	K.3	1 <sup>st</sup> sentence and 1 <sup>st</sup> table	Ed	Incorrect line reference to (B.2.2 line 70)	Change to (B.2.3 line 68)	
JP10 9	Bibliography	Line 1-5	Ed	There are useless spaces between item numbers and head of sentences.	Cut down spaces	
JP11 0	Bibliography	Line 8	Ed	Incorrect name: ISO TR 19121	Change to "ISO/TR 19121"	

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# Template for comments and secretariat observations

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NO 1			ge	<p>Normative parts of ISO/DIS 19115 have been translated into Norwegian. This work was difficult because many of the English definitions of metadata classes and elements were not good enough. There is a risk that mistranslation (in the process of translating to other languages or by wrong usage at the national level) will lead to different use of the same class or element in different countries, and prevent interoperability.</p> <p>It is unlikely that the definitions can be substantially improved for this version. Could this be a subject for the help desk on implementations under the advisory group on outreach?</p>		
NO 2	6.5	Table 3	ed	<p>The reference within "Geographic location of the dataset (by four coordinates or geographic identifier) (C)" is confusing. The path to <i>MD_DataIdentification.geographicIdentifier</i> is not precise enough. Either it should be <i>MD_DataIdentification.geographicDescription</i> to be on the same level as <i>MD_DataIdentification.geographicBox</i> or the reference should show the whole path such as <i>MD_DataIdentification.geographicDescription.EX_GeographicDescription.geographicIdentifier</i>. Similar changes to <i>geographicBox</i></p>	Change to: (MD_Metadata > MD_DataIdentification.geographicBox or MD_DataIdentification.geographicDescription)	

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NO 3	Annex B, B.2.4.2	Line 124	ed	<p>Confusing definitions</p> <p>1. DQ_ThematicAccuracy accuracy of quantitative attributes and the <u>correctness of non-quantitative attributes</u> and of the classifications of features and their relationships</p> <p>2. DQ_NonQuantitativeAttributeAccuracy <u>correctness of non-quantitative attributes</u></p> <p>Both elements <u>have correctness of non-quantitative attributes</u> as the definitions (or part of the definition).</p> <p>Does this mean that the concept of DQ_ThematicAccuracy includes the concept of DQ_NonQuantitativeAttributeAccuracy?</p> <p>Unlikely.</p>	Clarify the difference between DQ_ThematicAccuracy and DQ_NonQuantitativeAttributeAccuracy by making the definition better.	
NO 4	Annex B, B.2.4.2	Line 126	ed	In the last DIS-version the classname DQ_NonQuantitativeAttributeAccuracy was changed from DQ_NonQuantitativeAttributeCorrectness. We do not have any problems with that, but the definition has not been changed accordingly.	Change the definition from correctness of non-quantitative attributes to: Accuracy of non-quantitative attributes Does this also resolve comment NO3?	
NO 5	Annex B, B.2.7	Line 187	ed	The shortName does not follow the rules for making tagged names.	Change refSysID to refSysId	

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NO 6	Annex B, B.2.7	Line 188	ed	<p>The definition of role name/ Reference System tells us something else than the UML-model in Figure A.9</p> <p>We have learned that it is the UML-model that is correct if there are inconsistencies. In this case the definition in Annex B seems to be right, but the graphics in the model does not tell the same story. What is the reason of dealing with a derived role name which is "Not applicable"?</p> <p>Is TM_ReferenceSystem really a subtype of RS_ReferenceSystem? This is not stated in DIS 19111(Figure B1).</p>	Clarify what is right and correct the model in annex A or the definition in annex B in accordance to this.	
NO 7	Annex B, B.2.7.2	Line 208	ed	<p>A Norwegian comment (NO5) on a previous DIS version has not been accepted. We are not sure of if the comment was understood correctly. We can't see the need of dealing with the class RS_Identifier as long as it contains the same elements (authority and code) as MD_Metadata using the same domain (CI_Citation and free text). This procedure has not been used elsewhere, and it does not help us much. We don't see that the use of RS_Identifier is a narrowing of the term MD_Identifier. The fact that the domain reference for geographicIdentifier (line 349) and others were changed from RS_Identifiers to MD_Identifiers also support this. .</p>	Change RS_Identifier to MD_Identifier within the whole standard.	
NO 8	Annex B, B.2.11.1and B.5.21	Line 310	ed	<p>The domain reference does not follow the rules for naming</p>	Change <<enumeration>> to <<Enumeration>>	
NO 9	Annex B, B.5.10	CodeList	ed	<p>The character set 8859part10 is widely used within Norwegian datasets. To be able to tell this in a metadata service we need to have this included in the CodeList.</p>	Include 8859part10 in the list, preferably with domain code 015.	
NO 10	Annex B, B.5.13	CodeList, line 12	ed	<p>The MD_DatatypeCode is not named following the rules for making tagged names</p>	Change "metaclass" to "metaClass".	

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NO 11	Annex B, B.5.18	CodeList, line 9,10,11,12	ed	Codes 008 and 009 are used twice	Make the necessary corrections.	
NO 12	Annex B, B.5.23	CodeList, line 8	ed	The MD_ProgressCode is not named following the rules for making tagged names	Change “underdevelopment” to “underDevelopment”.	
NO 13	Annex B, B.5.28	line 1-10	ed	<p>It's hard to understand the use of this MD_TopologyLevelCode because It's difficult to understand the meaning of the definitions.</p> <p>Some of this concepts are better described in DIS 19107 Spatial Schema:</p> <p>The porposed change is mostly based on DIS 19107 and theory books, and should eventually be checked by a 19107 expert if accepted. If possible, the definitions should be further elaborated and exemplified.</p>	<p>Rewrite the definitions or add some examples of use.</p> <p>geometry only - geometry objects without any additional structure which describes topology. Commonly called spaghetti-data.</p> <p>topology1D - 1- dimensional topological complex - commonly called “chain-node” topology</p> <p>planar graph - 1-dimensional topological complex which is planar. A planar graph is a graph that can be drawn in the plane in such a way that no two edges intersects except at a vertex.</p> <p>fullPlanarGraph - 2-dimensional topological complex which is planar. A 2-dimensional topological complex is commonly called “full topology” in a cartographic 2D environment.</p> <p>surfaceGraph - 1-dimensional topological complex which is isomorphic to a subset of a surface. (A geometric complex is isomorphic to a topological complex if their elements are in a one-to-one, dimension-and boundary-preserving correspondence to one another.)</p> <p>fullSurfaceGraph - 2-dimensional topological complex which is isomorphic to a subset of a surface</p>	

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					<p>topology3D - 3-dimensional topological complex. A topological complex is collection of topological primitives that is closed under the boundary operationsfull Topology3D - complete coverage of a 3D coordinate space</p> <p>abstract - topological complex without any specified geometric realisation</p>	
NO 14	Annex D, D.4	D4.1 b)	ed	We have noticed that we have got a new clause D4. that was not included in a previous DIS version. We don't disagree of having this clause, but we see the need of including the D3 tests (User-defined extension metadata test suite) on profiles also.	Include D3 in D.4.1 b) so its says: Test Method: apply tests defined in clause D.2 and D.3 of this standard.	
NO 15	Annex E	E1	ed ??	<p>Some new text has been inserted in this DIS version saying: "The following are changes that were made to create the profile:</p> <ul style="list-style-type: none"> <li>The MD_ServiceIdentification class was removed, as well as the "identificationInfo" role (between MD_Metadata and MD_Identification)..... and more.</li> </ul> <p>We can not recognise any discussion or reason for removing the MD_ServiceIdentification class. The importance of services in connection with geographic information is increasing. The relations to services should therefore not be weakened.</p>	Insert the MD_ServiceIdentification class again, or explain why this has been removed.	

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SE -1			G	Sweden appreciates the good work done to ISO 19115. The structure of this document regarding data quality is very different from the structure of ISO 19113, Quality principles (QP). This makes it difficult to implement quality in a rational manner. The UML diagrams does not reflect QP:s structure of elements, subelements and descriptors. QP may be difficult to model, which possibly indicates that it is QP that should be restructured.	Restructure to harmonise with QP. (Or change QP!)	

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SE -2	3		E	As normative 5.5 package abbreviations includes references to ISO 19119 and ISO 19123 these standards should be added in Clause 3.	Add normative references to ISO 19119 and ISO 19123	
SE -3	4.1		E	The definition is not harmonized with ISO 19103. But the example in the definition from ISO 19103 also includes SG_Point that could be changes to something else. (The package "SG" is not included in 5.5) Better use GM_Point that exists.	Use the definition from ISO 19103. Use the note from 19103 but change SG_Point in the example to GM_Point	
SE -4	4.2		E	The note differs from the one in ISO 19113	Harmonize	
SE -5	4.6		E	The definition is not harmonized with ISO 19103.	Harmonize	
Se -6	4.6 and 4.7		E	As NOTE1 in 4.6 and NOTE2 in 4.7 both discusses UML, they should both be named NOTE2	Change order of NOTES for 4.6	
SE -7	4.9		E	The definition is not harmonized with ISO 19103.	Harmonize	
SE -8	5.3	Figure 2	E	This figure is not as instructive as the corresponding one in e.g. ISO 19111.	Replace the figure with figure 1 from ISO DIS 19111.	
SE -9	6.3.2.2	last line	E	ISO 10646-1 is earlier referred to as ISO/IEC 10646-1.	Write ISO/IEC 10646-1	

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<b>SV -10</b>	B.2.4 table and UML- diagrams		T	<p>QP contains three data quality overview elements, purpose, usage and lineage. Purpose and usage is not to be found in the part of Metadata covering quality reporting.</p> <p>B.2.2 contains in line 26 a part named purpose. It is not clear if this is the same purpose as the one in QP as the descriptions differ. No reference is made to this in the UML model. It is furthermore not mandatory, as is purpose in QP. The descriptions and obligations should be the same, or a new term, QP_purpose, should be introduced.</p> <p>B.2.2.5 deals with usage information. The description of this differs considerably from the one in QP. This is about current use while QP speaks about all usage that the producer is aware of. This calls for a change of the definition of usage in B.2.2.5 or a new term QP_usage.</p>	Make the standard consistent regarding purpose and usage in ways indicated in comment. Change the definition in b.2.2.5 and b2.2. Line 26 shall be mandatory.	
<b>SV -11</b>	B.2.4. table	line 79	T	The name is written as scope.	If this <i>scope</i> is the same as <i>data quality scope</i> mentioned in QP, the full name should be used.	

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SE -12	B.2.4 table	line 79	T	Maximum occurrence is set to 1. If the referencing object is a data quality subelement, multiple scopes may be identified.	Change maximum occurrence to N if appropriate.	
SE -13	B.2.4.1 table	lines 83 to 85	T	If the scope level is <i>dataset</i> or smaller is of no interest, lineage is always important. A part of a dataset is also a dataset per definition. According to the UML diagram, lineage is part of the scope and the definition of scope tells that it may be a smaller grouping of data located physically within the dataset.	Remove DQ_scope.level = "dataset" or "series".	
SE -14	B.2.4.1 table	line 84	E	Process steps describe what happens to the dataset after creation. Collection processes are source information.	Change the definition. <i>Information about events in the life of a dataset specified by the scope.</i>	
SE -15	B.2.4.1 table	line 86	T	Process steps have nothing to do with the creation of the dataset. It is history information that shall cover the life of the dataset <b>after</b> creation, including maintenance.	Change the description to cover what is stated in QP. A record of events or transformations in the life of a dataset, including the process used to maintain the dataset whether continuous or periodic, and the lead-time.	
SE -16	B.2.4.1 table	line 88	T	No such thing as rationale is mentioned in QP. If Metadata incorporates subjects not in QP, they should occur in that standard as well.	Harmonise with QP	
SE	B.2.4.1.1	line 89	T	It is highly essential, for a dataset that has	Make dateTime mandatory.	

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-17	table			undergone several processes, to know the order. For this reason, date is important. Transformation parameters may have changed at a certain date. Therefore the date of a transformation is essential to know.		
SE -18	B.2.4.1.1 table	line 90	T	No such thing as processor is mentioned in QP. If Metadata incorporates subjects not in QP, they should occur in that standard as well.	Harmonise with QP. Add this in QP.	
SE -19	B.2.4.1.2 table	line 92 to 98	T	QP states that source information shall describe the parentage of a dataset. These lines do not cover this. The level is covered in the scope, the denominator is just one tiny bit of information regarding a map as is also the datum. Spatial information has nothing to do with parentage and should be covered by the scope. The most important thing, where the data does come from, is not even part of the list. Line 98 is obsolete as process steps report what happens to the dataset <b>after</b> creation. <i>See comment about line 86</i>	Make a new list covering <ul style="list-style-type: none"> <li>Responsible party for collection</li> <li>Method of collection</li> <li>Date of collection</li> <li>Reference datum</li> </ul>	
SE -20	B.2.4.2 table	Heading	T	This is not information about data quality elements but about data quality subelements. The descriptors belong to them, not to the data quality elements. The data quality elements are just logical	Change the heading to data quality subelements.	

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				themes into which the subelements are grouped.		
SE -21	B.2.4.2 table	line 99	T	A data quality element or subelement is certainly not a type of test.	Change to <i>Aspect of quantitative quality information</i>	
SE -22	B.2.4.2 table	line 100	T	As QP states <i>shall</i> , if the name is known, the name can't be optional.	Change to M	
SE -23	B.2.4.2 table	line 101	T	No such thing as <i>measure identification</i> is mentioned in QP. Metadata should not add components. Are there really registered standard procedures for percentage, standard deviation etc?	Remove this entry from the table.	
SE -24	B.2.4.2 table	line 102	E	The words <i>being determined</i> seems out of place.	Remove.	
SE -25	B.2.4.2 table	line 102	T	The description is mandatory according to ISO19113.	Change to M or C/.not. measID.	
SE -26	B.2.4.2 table	line 103	T	<i>Evaluation method</i> is only mentioned in the term list in QP and no demands for reporting is made.	Remove this entry from the table.	
SE -27	B.2.4.2 table	line 104	T	No such thing as <i>description of evaluation method</i> is mentioned in QP. Metadata should not add components.	Remove this entry from the table.	
SE -28	B.2.4.2 table	line 105	T	According to 19113, this is mandatory.	Change to M or C/.not. measID.	
SE -29	B.2.4.2 table	line 106	T	According to 19113, this is mandatory.	Change to M or C/.not. measID.	
SE -30	B.2.4.2 table	line 106	T	A data quality measure may well be applied on different dates for the same	Change 1 to N if range only includes consecutive days	

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				scope. Maybe the problem is caused by the fact that we do not have the full understanding of the word <i>range</i> .		
SE -31	B.2.4.2 table	line 106	T	The standard gives no indication on how to report time intervals.	Add description on this.	
SE -32	B.2.4.2 table	line 107	E	Outcome should be one word.	Correct.	
SE -33	B.2.4.3 table	line 133	T	This line and the UML diagram are not in agreement with QP. Here, the result has attributes (lines 136 to 139). In QP, all of them are descriptors of data quality subelements. It may work this way, but than we have lost the connection to QP. The result is not information about the value, <b>it is the value</b> .	Follow the structure in QP and redraw the UML diagrams. After that has been done, these tables can be reconstructed.	
SE -34	B.2.4.3 table	lines 134 and 135	T	These are mandatory in 19113. Value (quanVal) cannot stand on its own.	Change to M.	
SE -35	B.2.4.3 table	line 137	T	The value <b>is</b> the result or vice versa. The value is not an attribute to the result.	See comment to line 135.	
SE -36	B.2.4.4 table	line 138	T	The definition is sort of circular and makes no sense (content describes the items specified by the content). There is a perfectly adequate definition in QP.	<i>extent or characteristic(s) of the data for which quality information is reported.</i>	
SE -37	Annex E		T	Annex E includes a profile but we do not think that we can hide an international standardised profile within ISO 19115. ISO19106 will give directives on how to	Make Annex E informative. Relate text to ISO 191106 and change text to: This annex exemplifies what could be	

<sup>1</sup> **MB** = Member body (enter the ISO 3166 two-letter country code, e.g. CN for China; comments from the ISO/CS editing unit are identified by \*\*)

<sup>2</sup> **Type of comment:** **ge** = general **te** = technical **ed** = editorial

**NOTE** Columns 1, 2, 4, 5 are compulsory.

## Template for comments and secretariat observations

Date:	Document:
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1	2	(3)	4	5	(6)	(7)
MB <sup>1</sup>	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/ Note (e.g. Table 1)	Type of com- ment <sup>2</sup>	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
				make a profile. It must be possible to have a unique identification of the standardised profile. The text does not relate to ISO 19106 as we think it should. The profile in the annex is not a profile. It is only a view of the intended profile.	included in a comprehensive dataset metadata profile that could be a basic profile according to ISO19106. Change text of figure 1 to “View of comprehensive metadata profile.	

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<sup>2</sup> **Type of comment:** **ge** = general **te** = technical **ed** = editorial

**NOTE** Columns 1, 2, 4, 5 are compulsory.

1	2	(3)	4	5	(6)	(7)
MB <sup>1</sup>	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note (e.g. Table 1)	Type of comment <sup>2</sup>	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
CH1	6.5, A2.4	Table 3, Figure A.4	te	The list of core metadata elements contains LI_Lineage.Statement which is part of the aggregate DQ_DataQuality. For datasets a condition implies that DQ_DataQuality.report is a mandatory class and therefore DQ_Element.result (which is a mandatory attribute in DQ_DataQuality.report) should be a core metadata element as well.	Add DQ_DataQuality.report to the list of core metadata elements or drop the condition: "reprot" and "lineage" role are mandatory if scope.DQ_scope.level = "dataset"	
CH2	A in general, e.g. A.2.1 and A.2.10	UML schemas in general, e.g. figures A.1 and A.12	ge	According to the UML definition some part (object of the subclass) of an aggregation can be related to several wholes (objects of the superclass). But e.g. in figures A.1 and A.12 an object of the class MD_Distribution contains data as value of the attribute transferSize (in the associated class MD_DigitalTransferOptions), which can only be used by one object of the class MD_Metadata.	Check the aggregations in the UML diagrams of Annex A and replace by compositions if necessary	
CH3	A.2.1	Figure A.1	te	The attribute MD_Metadata.parentIdentifier represents a recursive association and should therefore be modeled as such.	Model the recursive association as such.	
CH4	A2.12, A3.2	Figures A.14 and A16	ge	CI_Citation is defined as a DataType in figure A.16 and used as aggregation (in attribute form) in figure A.14. This implies that the same citation data have to be copied to 17 different places if it is used 17 times. If it changes, it has to be changed at 17 different places too. This redundancy is not useful.	Define CI_Citation as class and associate it by aggregation (instead of composition) to the classes where it is used now as attribute	
CH5	B2.8	Row 233	ed	ISO/DIS 19110 recommends the use of a conceptual schema language to model feature catalogue information. We suggest reflecting this recommendation in the definition of MD_FeatureCatalogueDescription.	Add to the definition the <u>underlined text</u> : “Information identifying the feature catalogue <u>or</u> the conceptual schema”	
CH6	Annex F		ge	An XML-DTD is only useful, if it can fully automatically be derived from the conceptual schema. Otherwise differences between the conceptual schema and the transfer format description are inevitable and priority rules have to be given for their resolution.	Replace the long-names (automatically) by short names in the conceptual schema before the automatic calculation of the XML-DTD. Describe all encoding and transformation rules used so that the procedure can be reproduced.	

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<sup>2</sup> **Type of comment:** **ge** = general **te** = technical **ed** = editorial

**NOTE** Columns 1, 2, 4, 5 are compulsory.

## Comments from UK on document ISO/DIS 19115

The UK considers this draft to be unacceptable as an IS. There are several areas where DIS 19115 is inconsistent with other 191xx standards. Whereas it must be a high priority to get these standards published and allow market feedback to start as soon as possible so that they can evolve, it will undermine the fundamental objectives of compatibility and inter-working to publish standards which are inconsistent with the other 191xx standards. Some examples to demonstrate this inconsistency are given in the attached detailed comments using 19111. But 19111 is not the only normative standard with which 19115 may conflict. Conflicts with the TC211 projects covering gridded data and imagery are also to be expected. The issue is not whether one of 19111 and 19115 is better than the other, but the fact that any inconsistency between them creates confusion for users of the 191xx suite of standards. These inconsistencies will potentially lead to conflicting implementations of the [non]standards. The problem will only be resolved by forcing 19115 to be consistent with other 191xx normative standards (such as 19111) by making direct reference to those standards. Unnecessary detail in 19115 that overlaps with those other standards should be removed.

The UK also believes that the core metadata set is still inadequately specified.

Member	Clause/ subclause	Paragraph/ Figure/ Table	Type of com.	Comment	Proposed change
UK1	6.5	Table 3	E	The table is in a different format from the data dictionary given in Annex B, and it is very difficult to find the details of these elements.	Restructure the table with headings: Core metadata element, Metadata element number, Metadata element name, Definition, Obligation/Condition
UK2	6.5	Table 3	E	Dataset responsible party is a class not an element	Replace with full set of elements (375-379)
UK3	6.5	Table 3	E	Geographic location of the dataset is a class not an element	Replace with full set of elements (344-347 & 349)
UK4	6.5	Table 3	E	Spatial resolution of the dataset is a class not an element	Replace with full set of elements (60, 61)
UK5	6.5	Table 3	E	Distribution format is a class not an element	Replace with full set of elements (285, 286)
UK6	6.5	Table 3	T	Additional extent information for the dataset is a class not an element	Replace with essential elements (351, 356)
UK7	6.5	Table 3	T	Reference system is a class not an element	Replace with reference system identifier (187)
UK8	6.5	Table 3	T	Online resource is a class not an element	Replace with essential element (275)
UK9	6.5	Table 3	T	Metadata about metadata is not essential metadata (except for date stamp an point of contact), as it is concerned with the metadataset and not specifically the dataset	Delete Metadata file identifier, Metadata standard name, Metadata standard version, Metadata language, Metadata character set
UK10	6.5	Table 3	T	The purpose of the dataset is important discovery metadata	Add new core metadata element "Purpose" (26)
UK11	6.5	Table 3	T	Use constraints are important discovery metadata	Add new core metadata element "Use Constraints" (71)

Member	Clause/ subclause	Paragraph/ Figure/ Table	Type of com.	Comment	Proposed change
UK12	A.2.7	Figure A.9	T	The detail given here is different from that given in 19111. Details of the coordinate system are missing from 19115, including axis information which gives the positive direction and order of coordinates.	
	B.2.7				
	6.3.2.7			MD_CRS is subclassed as an aggregation of MD_ProjectionParameters and MD_EllipsoidParameters with MD_ProjectionParameters being an aggregate of MD_ObliqueLineAzimuth and MD_ObliqueLinePoint is inconsistent with 19111. In 19111 CRS is an aggregation of datum and coordinate system and conditionally also of 'projection'. 'Projection' is an aggregation of coordinate operation method and appropriate coordinate operation parameter values.	
	B.2.7.1	Lines 202 - 204		The ellipsoid parameter definition is identical in intent but differs in detail from the provisions of 19111 table 6. The conditions of applicability also differ.	Delete B.2.7.1
	B.2.7.3	Lines 209- 211		This information is a subset of projection parameters which are given in B2.7.5.	Delete B.2.7.3
	B.2.7.4	Lines 212- 214		This information is a subset of projection parameters which are given in B2.7.5.	Delete B.2.7.4.
	B.2.7.5	Lines 216- 231		The projection parameters listed are a subset of those possible.	Delete B.2.7.5
				All that is required in 19115 is to refer to the provisions of 19108, 19111 and 19112.	Delete lines 186-197. Lines 198-200 then refer directly to 19108, 19111 and 19112 without conflict.
UK13	B.2.7.2		T	These provisions conflict with ISO 19103 as described through ISO 19111 section 6.6. Provision for identifier/citation information should be made in the normative references.	Delete B.2.7.2.

Member	Clause/ subclause	Paragraph/ Figure/ Table	Type of com.	Comment	Proposed change
UK14	B.3.1.1	Line 343	T	The note in the definition uses terminology which is inconsistent with ISO 19111.	Change 'coordinate system' to 'coordinate reference system'
	B.3.1.1 B.3.1.3	Line 343 Line 358		The provisions for horizontal and vertical coordinates are inconsistent. Horizontal extent, according to 343, is approximate and does not require CRS to be identified. Vertical extent, in line 358, requires the CRS to be identified.	(i) Delete line 358. (ii) Add the note in the description in line 343 to line 341. (iii) Add the note in the description in line 343 to line 354.
	B.3.1.3	Lines 353-357		The provision for user-defined height units is inconsistent with the requirement to give horizontal coordinates in degrees. For metadata purposes ISO standard units should be mandated.	(i) delete line 357. (ii) in lines 355 and 356 replace “extent contained” with “extent in metres contained”

Member body	Clause / subclause	Paragraph / Figure / Table	Type of comment (general / technical / editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
ANSI			General	It is not clear how Code Lists are extended.	A method for extending <i>CodeLists</i> needs to be given or explained better.	
ANSI			Technical	The distinctions between <i>identificationInfo&gt;resourceFormat</i> , <i>identificationInfo&gt;environmentDescription</i> and <i>identificationInfo&gt;citation&gt;presentationForm</i> are not clear..	Some guidance or illustration is needed of when each should be used, and the rationale for having this information in three different places explained	
ANSI			Technical	The distinctions between <i>distributionInfo&gt;distributionFormat</i> vs <i>distributionInfo&gt;transferOptions&gt;offLine</i> are not clear.	Some guidance or illustration is needed of when each should be used. .	
ANSI	6.2	Figure 3	Editorial	The part-whole relationships between datasets and aggregates are shown in Figure 3. However, the <i>DS</i> package is not fully documented in Annex A and Annex B.	Add an attribute to MD-Metadata which supports describing the relationship between datasets and aggregates. Add it to Annex A and B	
ANSI	6.4.1		Technical	<i>EX_Extent</i> is not properly symmetrical between spatiotemporal dimensions, or between horizontal and vertical dimensions.	Maybe a more normalised solution would be better.	
ANSI	A.2.1 A.2.8	Figure A.1 Figure A.10	Technical	<i>MD_ContentInformation</i> should be <<Abstract>>	Change the stereotype to <<Abstract>>.	
ANSI	A.2.10	Figure A.12	Technical	Missing aggregation relationship from <i>MD_Identification</i> (role= <i>resourceFormat</i> ) to <i>MD_Format</i>	Add the relationship.	
ANSI	A.2.4	Figure A.4	Technical	<i>DQ_Result</i> should be <<Abstract>>	Change the stereotype to <<Abstract>>.	
ANSI	A.2.5	Figure A.7	Technical	Missing aggregation relationship from	Add the relationship.	

Member body	Clause / subclause	Paragraph / Figure / Table	Type of comment (general / technical / editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
				<i>MD_Identification</i> (role= <i>resourceMaintenance</i> ) to <i>MD_MaintenanceInformation</i>		
ANSI	A.2.7 B.2.7.2	Figure A.9	Technical	Additional attributes are required to provide an alternate way to identify a coordinate reference system	Add two attributes to RS_Identifier codeSpace and version (See A Below)	
ANSI	A.3.2 B.5.5	Figure A.16	Technical	There is no way to identify an author of a cited reference (From ISO 19111 comments)	Add "author" to CI-RoleCode	
ANSI	B		Technical	The tables in Annex B include many elements that are identified by role names from the UML model; the data types for these elements is identified as "Association." In fact, a role name is a reference to a class at the end of the association, and it is the class that holds the pertinent data.	Change data type from "Association" to "Class" for every element identified by a role name.	
ANSI	B.1.5.1		E	"shall always be documented" Where? Not obvious in context.	Change to. "This is a descriptor always documented...always be documented in the metadata. Change contains value(s) => contains values(The editing committee of 19115.3 said it would make these changes but they are not in the new text.	
ANSI	B.2.6	Element 163 transformation parameter availability	Editorial	"...whether parameters for transformation exists"  Subject verb agreement	"exists" => "exist" or "are available" (second alternative was in editing committee report.	
ANSI	B.2.6	Element 163 transformation parameter availability	Editorial	original comment was listed as accepted with modifications, but editing committee reply did not address question of what transformation parameters were for, either by including specifics in text or stating why it was not necessary to do so	Change to "whether parameters for transformation between image coordinates and geographic or map coordinates exist (are available)"	
ANSI	B.5.27		Technical	The CodeList <i>MD_TopicCategoryCode</i> , which contains the values of the mandatory element	Complete the list.	

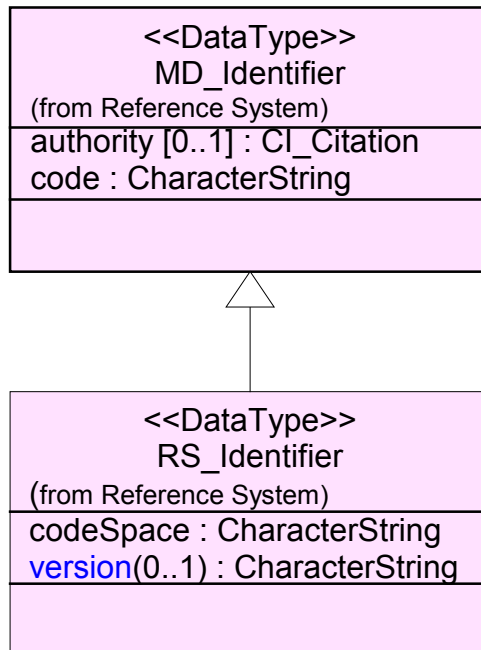
Member body	Clause / subclause	Paragraph / Figure / Table	Type of comment (general / technical / editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
				<i>identificationInfo&gt;topicCategory</i> , is a mixture of subject and functional classifications. It is not comprehensive, and thus precludes the use of ISO 19115 for subject areas not included in the list.		
ANSI	F.2		General	Short names and code numbers in the DTD would better ensure language neutrality.	Replace the DTD and example with the attached files [dtd-short-esri.dtd and xml-sample.xml].	}
ANSI	F.2	Part 1	Editorial	Typographical error.	"conversionToISOstandarUnit" should be "conversionToISOstandardUnit". (Define what is an ISO standard unit)	
ANSI	F.2	Part 5	Editorial	Incorrect element name in the entity DigTranOps under Distribution Entities.	under Distribution Entities, the entity DigTranOps contains the element "onLineMed". That should be "offLineMed".	
ANSI	F.2	Part 5	Editoriial	Typographical error in the entity Distributor under Distribution Entities.	"distroTran" should be "distorTran".	
ANSI	F.2	Part 5	Technical	The entity "GeoBndBox" in the Extent entities section is missing the element "exTypeCode?". It should be in there with the bounding coordinate elements to say whether the box represents an area of inclusion or exclusion.	Add the element "exTypeCode" to the entity "GeoBndBox."	

## RS\_Identifier Issue

### B.2.7.2

Name	Short Name	Definition	Obligation	Maximum Occurrence	Data Type
authority	identAuth	Authority citation	O	1	CI_Citation
code	identCode	Alphanumeric value identifying an instance in the namespace	O	1	CharacterString
codeSpace	identCodeSpce	Name or identifier of the person or organization responsible for namespace	O	1	CharacterString
version	identVrsn	Version identifier for the namespace	O	1	CharacterString

### A.2.7



Member body	Clause/ subclause	Paragraph/ Figure / Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
OGC	6.2 B.2.1 B.2.2	Figure 3 Figure A.1 Figure A.2	Editorial	The part-whole relationships between datasets and aggregates are shown in Figure 3. However, the DS package is not fully documented in Annex A and Annex B.	<p>Add the attribute 'dataSet' to MD_Metadata to represent the dataset to which metadata applies. See Attachment A for a summary of changes to the associated figure(s) and data dictionary.</p> <p>Create/add a new class 'MD_AggregateInformation' to the Identification information package to represent dataset aggregation information. See Attachment B a summary of changes to the associated figure(s) and data dictionary.</p> <p>Create an aggregate relationship between MD_AggregateInformation and MD_Identification with a role named "aggregationInfo" of cardinality of [0..*] (see Attachment B).</p>	
OGC	B.2.4.1	Figure A.5	Editorial	<p>Figure A.5 correctly depicts that the attribute 'statement' (LI_Lineage), the role 'processStep' (LI_ProcessStep) and the role 'source' (LI_Source) can coexist.</p> <p>However, table B.2.4.1 indicates otherwise (e.g. that 'statement' should only be present if both the roles 'source' and 'processStep' are not provided, and, that either role can only be present if 'statement' is not present and if the other role is not present).</p>	<p>Make the following changes to table B.2.4.1:</p> <ul style="list-style-type: none"> <li>Delete the 'Obligation/Conditional' entries for Role names 'processStep' and 'source'</li> <li>Remove the "... and source and processStep not present?" statement from the 'Obligation/Conditional' entry for the attribute 'statement'.</li> </ul>	

Member body	Clause/ subclause	Paragraph/ Figure/ Table	Type of comment (general/ technical/editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
OGC	Annex E	E.1  Figure E.1	Technical	Annex E needs to be updated with all changes made to-date to create the comprehensive dataset metadata profile.	Replace the content of paragraph E.1 with the text that provided in Attachment C.  Replace Figure E.1 with the figure provided in Attachment C.	
OGC	Annex F		Editorial	Annex F (DTD implementation) needs to be updated in accordance with the most recent profile.	If Annex F is not removed from the standard, provide the revised/updated content for the DTD during a future editing session.	
OGC	Annex ???		Editorial	Create an additional informative annex containing the XML schema implementation of the conceptual model.	Provide the content for the suggested annex during a future editing session.	

## Attachment A

This attachment describes the changes to the ISO 19115 standard resulting from the addition of the 'dataSet' attribute to MD\_Metadata.

### **Figure A.1 changes**

The modified MD\_Metadata class will be represented in Figure A.1 as follows:

MD_Metadata (from Metadata entity set information)
+ fileIdentifier [0..1] : CharacterString + language [0..1] : CharacterString + characterSet [0..1] : MD_CharacterSetCode = "utf8" + parentIdentifier [0..1] : CharacterString + hierarchyLevel [0..*] : MD_ScopeCode = "dataset" + hierarchyLevelName [0..*] : CharacterString + contact : CI_ResponsibleParty + dateStamp : Date + metadataStandardName [0..1] : CharacterString + metadataStandardVersion [0..1] : CharacterString + dataSet : CharacterString

### **B.2.1 changes**

The data dictionary of MD\_Metadata (B.2.1 Metadata entity set information) will change as follows. Note that the 'dataSet' attribute will be inserted as Item 12 and that the remaining items (Items 12 – 22) will be renumbered as items 13 – 23.

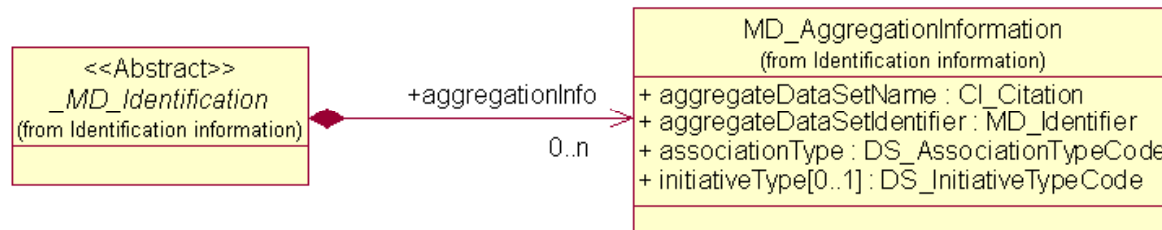
	Name / Role name	Short Name	Definition	Obligation / Condition	Maximum occurrence	Data type	Domain
12.	dataSet	dataSet	Identifies the location (URL) of the dataset to which the metadata applies	M	1	CharacterString	Free text

## Attachment B

This attachment describes the changes to the ISO 19115 standard resulting from the addition of the class 'MD\_AggregateInformation' to the Identification information package.

### Figure A.2 changes

The MD\_AggregateInformation class will be represented in Figure A.2 as follows:



### B.2.1 changes

The role 'aggregationInfo' will be added to the end of the data dictionary for MD\_Metadata (B.2.1 Metadata entity set information) as Item 24 as follows:

	Name / Role name	Short Name	Definition	Obligation / Condition	Maximum occurrence	Data type	Domain
24.	Role name: aggregationInfo	aggregationInfo	Provides aggregate dataset information	O	N	Association	MD_AggregateInformation (B.2.2)

## Attachment B - continued

### B.2.2 changes

Note that with the addition of the 2 items to B.2.1 (attribute 'dataSet' and role 'aggregationInfo'), the starting number of items appearing in B.2.2 will be 25.

The description of the class 'MD\_AggregateInformation' will be added to the end of B.2.2 as Items 50-54 as follows:

	Name / Role name	Short Name	Definition	Obligation / Condition	Maximum occurrence	Data type	Domain
50.	MD_AggregateInformation	aggregateInfo	Aggregate dataset information	O	N	Aggregated Class (MD_ Identification)	Lines 50-54
51.	aggregateDataSetName	aggrDSName	Citation information about the aggregate dataset	C / either this or aggregateDataSetIdentifier must be present	1	Class	CI_Citation (B.3.2) <<DataType>>
52.	aggregateDataSetIdentifier	aggrDSIdent	Identification information about the aggregate dataset	C / either this or aggregateDataSetName must be present	1	Class	MD_Identifier (B.2.8) <<Data Type>>
53.	associationType	assocType	Association type of the aggregate dataset	M	1	Class	DS_AssociationTypeCode (B.5.7) <<CodeList>>
54.	initiativeType	initiativeType	The type of initiative under which the aggregate dataset was produced	O	1	Class	DS_InitiativeTypeCode (B.5.8) <<CodeList>>

## Attachment C

This attachment describes the changes to Annex E of the ISO 19115 standard based on changes made to-date to create the comprehensive dataset metadata profile.

### **E.1 changes**

The contents of paragraph 'E.1 Comprehensive dataset metadata application schema' will be replaced with the text below:

The ISO 19100 series of geographic information standards define, in the abstract, the classes of information needed to: 1) model geographic phenomena; and 2) manipulate, manage and understand these models. In order to implement these standards, profiles must be developed. Typically, an information community with special requirements will develop profiles that use the appropriate parts provided by this series of standards. This comprehensive dataset metadata profile is a basic profile. It provides an international standardized profile applicable to a wide range of information communities. Use of this profile will promote interoperability between information communities. The comprehensive dataset metadata profile is a subset of packages, classes, attributes and relationships defined in Annexes A and B. Only the classes, attributes and relationships necessary to fulfill the requirements for general-purpose dataset metadata are present.

The following are changes that were made to create the profile:

- Removed MD\_ServiceIdentification class from the Identification information package
- Replaced simple conceptual types (Binary, Boolean, CharacterString, Date, DateTime, GenericName, Integer, Real, RecordType and TM\_PeriodDuration ) with XSD-equivalent types
- Replaced complex conceptual types (Angle, Distance, GF\_AttributeType, GF\_FeatureType, GM\_Object, GM\_Point, Measure, MemberName, Record, TM\_Primitive and UomLength ) with newly-defined XML-equivalent types
- Removed the Metadata application package (which contained classes of geographic information to which metadata applies – eg. DS\_Aggregate, DS\_Dataset, DS\_Initiative, DS\_OtherAggregate)
- Added attribute dataSet (type xsd:anyURI) to MD\_Metadata for XML implementation purposes
- To compensate for the loss of the Metadata application package, created/added the new class "MD\_AggregateInformation" to the Identification information package with following attributes: aggregateDataSetName (type CI\_Citation), aggregateDataSetIdentifier (type MD\_Identifier), associationType (type DS\_AssociationTypeCode) and initiativeType (type DS\_InitiativeTypeCode)
- Removed the aggregate relationship between MD\_Distribution and MD\_Format
- Removed RS\_ReferenceSystem and all of its derived classes
- Added the following attributes to RS\_Identifier: codeSpace (xsd:string) and version[0..1] (xsd:string)
- Constrained the implementation of the EX\_BoundingPolygon's polygon attribute to be a Box (upper and lower corner Points) or Polygon (outer and inner bounding Rings)
- Changed all non-conforming class associations (e.g. two-way association, one-way ByReference or Unspecified aggregation) to be one-way ByValue aggregation relationships

### **E.2 changes**

The contents of paragraph 'E.2 Comprehensive dataset metadata profile – UML model' will be replaced with the text below:

The comprehensive dataset metadata profile is presented in a UML metadata application schema, Figure E.1. The attributes within each class and codelist have not been displayed in the model in order to simplify the diagram. Note that the relevant application schemas for the conceptual model are not referenced by the diagram since all conceptual types from these schemas have been replaced with other XML equivalent types. The models of these XML equivalent types are also not displayed in order to simplify the diagram.

**Figure E.1 changes**

Figure E.1 – ‘Comprehensive dataset metadata profile’ will be replaced with the following diagram:

